EXHIBIT 155

student system
VISION

Massachusetts Institute of Technology
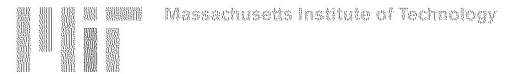
Student System Vision Project

Workshop Report

Financial Aid Workshop

September 19-21, 2007

\<Status DRAFT v#3\>

student system
VISION

Massachusetts Institute of Technology

Table of Contents

Delet

MITLIT-000226349

Introduction

MIT's Student Information System is a large and complex set of applications supporting our students' administrative life cycles starting with their application for admission and following them through their entire MIT experience.

The expectation, shared by students, faculty and staff is that MIT will provide services to support administrative, classroom, and informational needs through state-of-the-art Internet-based services that ensure the protection of student privacy. The various student applications now in use were developed over a period of years without a consistent architecture or user interface; they lack the flexibility to accommodate new functionality in a consistent, well-planned fashion. Many of the core applications, developed prior to the popular use of the Internet, force us to rely on outdated and inflexible technologies, some of which are at risk for losing vendor support. The original system focus was for administrative office use. In order to meet the expectations of today's students and faculty, a more student and faculty centric design approach is needed.

To this end, the Student System Vision Study, an Institute-wide initiative, will develop a vision and strategy for student systems to meet the current and future needs of our students, faculty and staff for the coming decades.

Workshop Goals and Objectives

The goals of the Student System Vision Study Workshops are to develop a broad understanding of MIT's current end-to-end business processes as well as to identify opportunities and need for change so that we can better support students, faculty, and staff. The information gathered from the workshops will be used to assess possible future student system solutions.

The overall objectives of each workshop are as follows:
- Develop a high level view of as-is process
- Document issues with current systems
- Capture MIT unique business processes and rules
- Identify various interfaces and integration points in use
- Document opportunities to improve how the system supports the process
- Develop a vision for future processes
- Develop an understanding of the student experience in the future vision

Financial Aid

Financial Aid is a critical component of the Student System Vision Study. MIT is guided by a principled commitment to meet each student's full need for financial aid. This

MITLIT-000226350
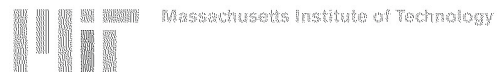
policy not only ensures our ability to attract and enroll high caliber students, but provides us with a critical competitive advantage over peer institutions. Financial Aid today is a complex and constantly evolving landscape of governmental, corporate, private donor, and institutional funding. Processing financial aid in a timely, efficient, and responsive manner depends heavily on integrated systems and business processes.

To ensure the Student Vision Study fully addressed MIT's Financial Aid requirements, a visioning workshop was conducted September 19-21, 2007 with participants from the Financial Aid Office, DUE, Registrar's Office, Admissions, IS&T, and other related functions. Due to the complex nature of the financial aid process and the mandatory government regulations to which Financial Aid must adhere, this workshop was broken into the following sub-topics at the request of Financial Aid: application tracking, communications, data integration, needs analysis, packaging, verification, disbursements, grants and restricted scholarships, parent and student loans, outside scholarships, and veteran benefits. This document communicates the information gathered at this workshop as well as the conclusions reached by the Student System Vision project team.

MITLIT-000226351

student system
VISION

Massachusetts Institute of Technology

List of Participants

Name	Department	Email Address	MIT Phone Ext.
David Andre	SFS	dander@mit.edu	8-5613
Daniel Barkowitz	SFS	barkowit@mit.edu	8-5612
Liz Barnes	SFS	barnes@mit.edu	8-5775
Claudia Battle	SFS	cbattle@mit.edu	3-3343
Leslie Bridson	SFS	lbridson@mit.edu	3-8477
Dean Briggs	IS&T	dpbriggs@mit.edu	4-5964
DuJuan Browder	SFS	dbrowder@mit.edu	8-0711
Mary Callahan	DUE	callahan@mit.edu	8-6432
Greg Che	SFS	gche@mit.edu	8-5667
Elizabeth Gorra	SFS	egorra@mit.edu	3-5614
Peter Hayes	Registrar's Office	prhayes@mit.edu	8-6406
Ben Jones	Admissions	bajones@mit.edu	3-4794
Hong Li	SFS	hli@mit.edu	8-5603
Sonia Liou	IR	sliou@mit.edu	8-5877
Melissa Martin-Greene	UAAP	melmart@mit.edu	3-3002
Brendon Puffer	SFS	brpuffer@mit.edu	8-0716
Neeta Purohit	SFS	npurohit@mit.edu	8-8968
Debbie Riparo	SFS	driparo@mit.edu	3-3344
Janet Sahlstrom	IS&T	janets@mit.edu	8-6486
JoAnne Stevenson	IS&T	jsteven@mit.edu	8-7870
Scott Thorne	IS&T	thorne@mit.edu	3-2978
Meredith Walsh	Admissions	mwalsh@mit.edu	8-5526
Tom Wanderer	IS&T	tjw@mit.edu	3-1597
Lan Wang	SFS	lanwang@mit.edu	8-5670
Mark Wiklund	IS&T	mwiklund@mit.ed	3-0686
Susan Wilson	SFS	sawilson@mit.edu	8-5609
Seth Winerman	IS&T	winerman@mit.edu	2-2187
Eleanor Wolcott	SFS	ewolcott@mit.edu	3-4007
Shirley Wong	Provost's Office	sywong@mit.edu	8-5876
Sophie Wong	IS&T	swong@mit.edu	3-8399
Norm Wright	IS&T	nwright@mit.edu	

student system
VISION

Massachusetts Institute of Technology

Current State - High Level Description

Overview

The current financial aid system is a mix of homegrown systems (MITSIS), third party proprietary software (PowerFAIDs), and many third party partners such as Campus Partners and College Board who provide outsourced processing functions. With so many different systems sharing information, one of the biggest challenges of the current financial aid process is keeping information across these multiple systems up-to-date, accurate, and reconciled. Presently, many of the feeds moving data from one system to another have problems requiring manual intervention. PowerFAIDs, which provides the core of financial aid processing for the Institute, is proprietary software and while it can be configured, it cannot be customized. This forces the Financial Aid office to rely on work-arounds that can be error prone.

To exacerbate the situation, the financial aid system needs to be flexible enough to support changing government regulations. At the same time, there is a growing divergence between federal financial aid rules and MIT policy. The way in which sub-funds are handled, separation dates are chosen, and outside scholarships are applied are just a few examples of things that MIT does in a unique way. MIT processes are designed to provide for compliance with federal regulations while supporting the Institute's financial aid philosophy.

Originally, MITSIS (MIT's Student Information System) was created to support the administrative functions of the Institute. Because the system was not created with students in mind, its design is not student centric. Therefore, student self service is an area of opportunity. Students will be better served if they can be provided consistent, accurate and timely information in one place, where they can also execute self-service transactions.

Following is a high level description of the current financial aid process. It is focused on the undergraduate financial aid process. Graduate aid is not processed through PowerFAIDs, and the awarding of graduate fellowships, assistantships, etc. is handled on the departmental level. These areas will be covered in a separate workshop.

Application Tracking

The tracking of a student's financial aid application begins with the student's admissions application. Once an applicant creates a MyMIT account and completes the biographic section of the application, an external data update load occurs sending information to MITSIS on those applicants who have checked a box stating that they

MITLIT-000226353
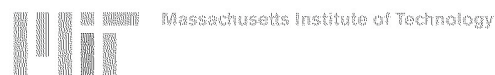
are applying for financial aid. At this time a MIT ID is assigned to the applicant. Through the application process, Financial Aid may have had dialogues with prospective students, but that preliminary information is not tracked so the student's communication history is lost.

Although the financial aid process begins with information received from Admissions, the Admissions calendar and the Financial Aid calendar are not in sync, creating timing differences that can impact service delivery. For example, Financial Aid needs to contact students who have been admitted about missing financial aid documents before the student has been notified that they have been admitted.

Processing in PowerFAIDs

PowerFAIDs, a vendor-provided tool used by Financial Aid, is maintained through quarterly updates provided by the vendor. The financial aid regulations applicable to a new aid year (beginning in January of each year) are released at calendar year end or early in the new year. Financial Aid must wait for the new federal regulations to be released before they can start processing student aid applications. Because the federal release does not occur at the same time every year, updates to PowerFAIDs may present a timing challenge. Only after the federal release can Financial Aid begin to receive information from Admissions. That has two drawbacks: Financial Aid has to play "catch up" as Admissions sends data that they have been collecting for months, and Financial Aid cannot confirm whether or not an applicant's FAFSA form has been received until the admissions record has been matched to the FAFSA information stored in PowerFAIDs. Delaying the receipt of applicant data and matching it to FAFSA information creates potentially significant customer service issues.

PowerFAIDs tracks student status throughout aid processing. Student status levels are:

- Incomplete application
- Ready for packaging
- Awarded
- Responded
- Incomplete for disbursement
- Ready for disbursement, and
- Disbursed.

At each stage, a student must provide required financial documentation. Missing documentation prevents movement to the next status.

MyMIT Applicant Portal

MITLIT-000226354

Applicants can view their financial aid status from the MyMIT portal. They can see which required financial documents MIT has received and which documents are still missing. Missing and received requirements are only displayed for the current student financial aid status within PowerFAIDS. That is done to reduce confusion and to keep students from perceiving a long list of missing requirements as a barrier to applying for financial aid. The information in the MyMIT portal is updated through a nightly feed from PowerFAIDs. The MyMIT view is only available to students until they receive their Kerberos ID in May of the year they apply. Once that occurs, a student must check their status in WEBSIS. This requires that the student be re-educated because not only does WEBSIS have a completely different look and feel, but the information a student can access is different.

Communications

Like application tracking, official communication between Financial Aid and the student begins when Financial Aid receives the applicant feed from the Admissions office. It would be ideal if communications could begin sooner when a student is a prospect so that Financial Aid could better help students with their planning and early awareness.

<u>Missing Information Letters</u>
Financial Aid sends out a range of missing information letters (MILs) in mailings that occur on a fixed schedule approximately every three weeks. Messages are also sent via email, but it is unclear which email address to use. At this point in the process new students do not have MIT email addresses, so the email address used is the one that the student submitted on their FAFSA form. However, this email address does not always match the one submitted on the admissions application. Therefore, the student may be receiving official communications from MIT at multiple addresses or not be receiving them at all.

Because of the unreliability of email, Financial Aid also mails letters to students. Although addressed to the student, these letters are always sent to the address of the student's parents. It is assumed that the parents will be the ones to read and respond to the letters. Privacy laws preclude the letters being addressed directly to the parents. The letters are produced in batch using the mail merge feature in MS Word.

Once Financial Aid receives all required materials, a complete letter is sent. This letter is then followed by an award letter, which triggers additional requirements leading to another round of missing information letters.

Missing information letters are sent out for each status of the financial aid process that a student moves through. They are:
- MILID – Missing Information Letter: Incomplete for Disbursement

- MILIP – Missing Information Letter: Incomplete for Packaging

Award Letters
Unlike missing information letters, award letters are only sent out in paper form. That is done because the security around email is not trusted, especially before students are assigned MIT email addresses. Ideally, award information could be available to a student through a portal, but no such portal currently exists, and WEBSIS does not display all of the information contained in an award letter.
PowerFAIDs does provide communication logging for communications made and for documents coming in and going out of the system.

Needs Analysis

Once a student submits all the required information for their financial aid application, needs analysis is performed. There are several different methodologies used for assessing need. They are listed below:

- FM (Federal Methodology)
    - Supported by PowerFAIDs
    - Mandated by Congress
    - Contains specific processes and formulas defined by the federal government
    - Updates to the methodology are issued by the government at least annually
    - Driven by information submitted on FAFSA form
- IM (Institutional Methodology)
    - Supported by PowerFAIDs
    - Has a host of options
    - Is a proprietary methodology developed by College Board
    - Profile is the source of the source of the data used by this methodology
- Non-Custodial IM
    - Not supported by PowerFAIDs
    - Done through College Board
    - Non-custodial profile is the source of data
    - Requires manual interfaces
- Global Methodology
    - Not supported by PowerFAIDs
    - Done through College Board
    - Used for international students
    - Capture key points of data manually and entered into PowerFAIDs

Additionally, MIT belongs to a "Section 568" group that uses a consensus approach (CA) for needs analysis.

Although the FM is required by the government to be used when awarding federal funds, MIT does not agree with the methodology and therefore uses the IM approach for determining need related to all MIT funds.

Meeting all of a student's need is the driving philosophy for financial aid awarding processes at the Institute; "need" under this policy is the need that is determined through the analysis using the IM.

Packaging

Once a new student's financial aid application is complete, packaging occurs. For continuing students, packaging occurs after verification (see Verification for more details). Packaging is the process by which grants (comprised of sub-funds), self help (loans and work study), parent contributions, and student contributions are assigned to a student. When entering this stage, a student's status is "Ready for Packaging" within PowerFAIDs. The packaging procedure relies heavily on manual processes that require a very knowledgeable staff.

Packaging is done within PowerFAIDs according to a set formula and is done for the entire academic year, not by semester. MIT has chosen a packaging methodology that provides for different formulas based on population sets. Each of these formulas can assign different funds, and each fund can have different eligibility rules. Students may fall within a certain population set but may not be eligible to benefit from all of the funds available to that population set.
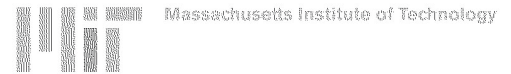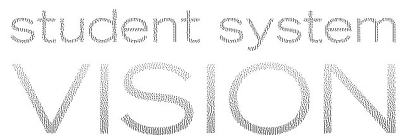
MIT has defined four mutually exclusive population sets:
- Freshmen with need
- Freshmen without need
- Upper classmen with need
- Upper classmen without need

The population sets and eligibility rules are defined in PowerFAIDs for automated packaging processing.

Re-packaging
If additional information is discovered after packaging occurs, a student's award must be re-packaged. Re-packaging in PowerFAIDs requires that the original package be deleted in its entirety; if any portion of the award is in "disbursed" status it cannot be deleted or re-packaged using delivered functionality. In these cases, re-packaging is completed manually. The manual re-packaging effort is extremely time consuming and error-prone. Ideally, PowerFAIDs could be integrated into MITSIS student

MITLIT-000226357

accounts in a manner that would support reversing disbursements and automation of the re-packaging process.

Self-Help
The packaging of self-help at MIT is unique. Instead of awarding a set amount of work study and student loans, MIT awards one self-help amount and the student then elects the mix of loans and work study assistance. Self-help is awarded in this manner because previously MIT found that many students were not accepting the loans that had been awarded to them.

Once students receive their awards, they are asked to fill out a paper form designating their self-help elections. Once the form is submitted, it is manually entered into PowerFAIDs, and the awards are re-packaged with the students' selections. One reason this process is completely manual is the limitation on re-packaging described above. Another factor is that students often alter their self-help selections mid-semester long after initial packages are disbursed. Improvement to the process and making it more timely could potentially be achieved through a student self-service capability for self-help elections.
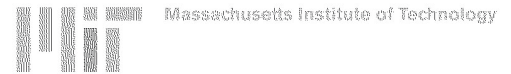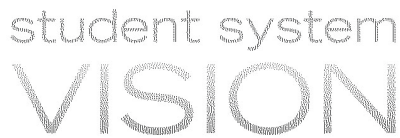
At present, MIT is facing pressure to decrease the amount of self-help required from a student. MIT requires the highest self-help level among its peer institutions; many peers do not provide student loans as part of the aid process. It is possible that within a 5-7 year timeframe, MIT might exclude loans and fund all self-help through work study. In that scenario a student would need to proactively seek loans.

MIT mandates a minimum student contribution. Within MITSIS and PowerFAIDs this contribution is treated as a fund, and like all other funds, it can be replaced with alternative funds. PowerFAIDs does not support MIT's treatment of the student contribution as a fund.

Financial Aid estimated their satisfaction level with PowerFAIDs processes for packaging at about 75%. Because MIT's packaging methodology is unique and highly customized, it requires manual intervention, which makes it time consuming and prone to human error. As a result, any future system would need to be extremely flexible to accommodate the Institute's needs for packaging.

Verification

Verification is the process by which the information submitted by the student and their parents is validated. This process occurs every year for students receiving aid, though it occurs at different times depending on whether the student is a returning upper classman or an incoming freshman. Upper classmen are verified prior to packaging.

This ensures that the packaging represents their true need. Because incoming freshmen need to be notified of their award earlier in order to make their acceptance decision, packaging needs to occur before the federal tax filing deadline of April 15. Therefore, freshmen go through packaging and are verified after the filing deadline. If incorrect information is discovered after the verification process occurs, the freshman's aid would need to be re-packaged. Although packaging does occur earlier for freshmen, the funds are not disbursed until the verification is complete.
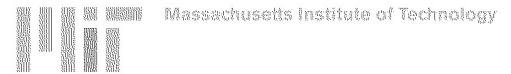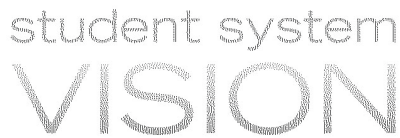
The College Board Profile and FAFSA are the sources of the data to be verified. The two data sets are not identical; the Profile contains more granular data than the FAFSA data, which is presented in summary. The verification process equalizes the two sets and compares it to tax forms.

The federal government mandates that 30% of an institution's financial aid applicants be verified and they identify which applicants are to be verified. However, because MIT participates in a program called Quality Assurance, the Institute can choose which populations and which documents verify. For the populations selected, MIT does not use sampling; instead the practice is to verify the entire population. MIT's Financial Aid office believes that selecting populations and verification procedures has proven more reliable than what is normally mandated by the government. As a participant in the Quality Assurance program, MIT must verify a random set of students every other year to demonstrate the effectiveness of the program as within governmental standards. That can result in certain students being verified twice.

Additionally when packaging, the IM analysis occurs based on the information submitted with the College Board Profile, and the FM analysis occurs based on the information submitted with the FAFSA form. The College Board also runs an analysis called EFM (Estimated Federal Methodology), an early estimator for applicants to determine how much aid they will receive. MIT uses this EFM as another source of verification, treating it as a proxy to determine if the data submitted through the FAFSA form matches the Profile. If the EFM matches the FM, the data is assumed to match as well. That is important because when Financial Aid does their verification, they are only verifying the information used on the IM side of the analysis (assuming the EFM matches the FM). If any mistakes are found, the appropriate changes are then migrated to the FM side as well.

For students who are Pell eligible, any changes that occur as a result of verification must be reported back to the federal government. MIT chooses to send back corrections for all of the students that are verified regardless of whether or not they are Pell eligible.

Although a student is not required to submit tax forms, parental tax forms are required. These include 1040s, K1 forms, business tax returns, all schedules, trust

documents and W2s. These forms are all submitted to the College Board. The College Board scans all of the documents creating electronic copies that are then bundled into an iDoc. All undergraduates also complete a College Board Profile (graduates do not complete the Profile). The College Board shares the iDoc and Profile with Financial Aid and it is this information that is used for their verification process.

The initial information provided by College Board only tracks whether a tax form has been submitted. It does not track whether all of the required schedules of the tax form have been submitted. When issuing initial MILs to students, Financial Aid may indicate that tax forms are complete when certain required schedules may be missing. Through the verification process the missing forms are discovered, resulting in some confusion for students and parents.

In addition to providing document images (iDoc), other services provided by the College Board include data entry of key data from the tax forms into a database file that can be loaded to PowerFAIDs. This reduces the amount of time Financial Aid staff spend keying data into the system.

As part of the iDoc that College Board sends, there is a checklist that parents complete noting all of the forms that they submitted with their taxes. This is very helpful to Financial Aid to track forms and schedules that are missing. Parents can bypass the checklist when submitting their information to College Board, causing some of the initial miscommunication on missing documents referenced above, The iDoc also tracks whether or not a tax form has been signed; signatures are required for verification. Limitations of the iDoc include that it does not recognize Puerto Rican tax forms and does not recognize the requirement for W-2s as being waived when there are none.

Any paper forms that come directly into Financial Aid are manually filed. PowerFAIDs does provide communication logging for communications made and for documents coming in and going out of the system. Additionally, it keeps an audit trail.

Disbursements

Disbursement is the means by which the packaged funds are applied to a student's account. At MIT this is a three step process known as DAR (Disbursement, Anticipated Funds, and Reconciliation). While most financial aid processing is completed in PowerFAIDs, disbursement is part of MITSIS processing.

Students at MIT receive one consolidated bill which is produced by the tenth of the month and is due the following first of the month (Note that although students only receive a bill monthly, they can look online at any time to view their status). The bill
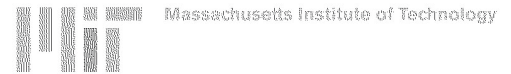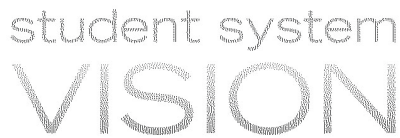
includes items such as housing, dining, tuition, fees, and health insurance. By default new and continuing students that are eligible to register, are initially billed as full-time students. A student's pre-registration status is not used because that information can and often does change. The first bill for the fall semester is produced on July 10th. To prevent students from being billed for costs that will be covered by their financial aid award, Financial Aid loads anticipated funds into PowerFAIDS and then posts them to student accounts (these anticipated funds are removed once actual awarded funds are assigned and disbursed, or they expire). The anticipated funds take into account the anticipated fees that will be associated with the actual funds and are posted as net receipts. The anticipated funds are only applied to a student's account if that student has completed the verification process and is in a status of "Ready for Disbursement".

Anticipated funds include outside scholarships if the money has not come in yet. For example, if a student notifies Financial Aid that they will be receiving a National Merit Scholarship, an anticipated fund is applied. All anticipated funds expire 2 to 3 weeks after they are applied, or when the actual funds are applied to the student account. From July 10 until registration, each day that there is any anticipated fund generated a file is sent to student accounts. This file is a complete replacement file; so that each time a file is sent, the file is larger than the previous one.

Once registration day passes and all of the registration forms have been entered, an update file is sent from registration to PowerFAIDs. This file is too large for PowerFAIDs processing capabilities so Financial Aid must use Microsoft Scheduler Service to transfer the updates in smaller batches. This problem arises multiple times a semester, occurring at least at registration and the 5th week when final subject add is completed.

After registration has occurred and PowerFAIDs has been updated, the actual disbursement job can be run. Registration information is necessary to confirm the eligibility for funds to be disbursed. Because of timing differences and the complexity of the process, registration update and disbursement of aid is not a linear process. New information can come into Financial Aid at any time and student financial aid and registration statuses can change. These changes can result in the need to re-package a student's aid, producing new anticipated funds, which continue to be applied through normal processing. The disbursement job is run before the anticipated funds job to prevent anticipated funds from being applied when the actual fund is ready to be disbursed.

Disbursements run based on a fund's effective date. This can create a problem where spring disbursements get prematurely disbursed, causing them to be applied to the wrong semester. Additionally, when dealing with late disbursements, there is the danger of disbursing the same fund multiple times because the effective date has already passed. These types of situations are difficult to catch and very problematic

MITLIT-000226361

because, once something is disbursed in PowerFAIDs, it cannot be reversed. There is currently a manual process to deal with this issue. A feature desired in a replacement system would be the ability to reverse disbursement so that automated processes could be re-run.

MITSIS processing is used to complete the disbursement process. There are several issues associated with the disbursement process and the interface between PowerFAIDs and MITSIS. When the Institute migrated to PowerFAIDs, replication programs were developed to duplicate PowerFAIDs processes in MITSIS so that disbursement processing could continue within MITSIS. Any differences between processing in the two systems results in financial differences and creates reconciliation issues.
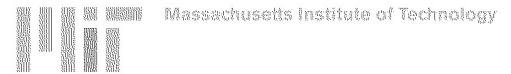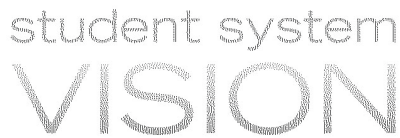
PowerFAIDs disburses in whole dollar values only, whereas MITSIS stores money values down to the cents. Therefore, if a fund is an odd dollar amount, PowerFAIDs cannot evenly distribute it across the fall and spring semester. It must award the extra dollar to one of the semesters. While not material, the difference creates reconciliation issues between the two systems.

Within PowerFAIDs the percentage of a fund that is awarded is stored by semester (e.g. 60% in fall and 40% in spring). However, when that information is replicated into MITSIS, by default MITSIS assumes that it will be an even split across semesters. It is then a manual process to go in and adjust the percentage split across semesters. The manual intervention to split funding by semester has to be repeated when there is a change or new information is received that results in an award change within PowerFAIDs. Once the information is again replicated to MITSIS, the manual split that had been entered is overwritten and reset to even split.

Once funds are disbursed, a credit is applied to the student account. Concurrently, the amount is also applied to a clearing account to update SAP. To support reconciliation, PowerFAIDs creates a reconciliation file that lists by student and by fund the amounts of each disbursement. That information is then compared to what is stored in MITSIS, and an exception report is generated. The only thing being reconciled is that the fund has been disbursed and that it has been applied on the student account. Although that process is automated, the handling of the exceptions is done manually. PowerFAIDs' manual correction tools are effective and allow corrections by fund and by disbursement.

Census Date

Students can add subjects up to the 5th week of classes, and they can drop subjects up to the 11th week. Financial Aid has decided to use a census date that corresponds to the add date plus three days to allow for processing of manual forms. On this

Page 15

census date, a snapshot is taken and brought into PowerFAIDs to a field called units frozen. Up until this census date, no financial aid adjustments are made based on enrollment status. The exception to this is Stafford loans, which are tracked by the disbursement date. It is at this point that any awarded funds for students who did not register are cancelled.

There is an appeal process at MIT by which a student may be allowed to add a subject past the 5th week add date. If late enrollment is granted, enrollment status changes must be updated within PowerFAIDs manually.
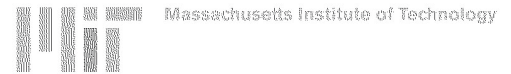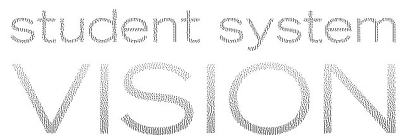
Withdrawal and Refunds

Students can withdraw from MIT at any point. There are three existing policies around student withdrawals: medical policy, federal policy, and written institutional policy. If a student withdraws for medical reason, they receive a full refund by MIT policy. The federal policy states that if a student has attended 60% or more of the semester, no money needs to be refunded to the student and financial aid awards are fully earned by the institution.

In some circumstances, MIT's institutional policy allows a full refund regardless of when the student withdraws. In these cases, the Financial Aid Separation Date is set to the first day of class and does not correspond to the actual withdrawal date. This can cause an over-award problem requiring that the federal funds be returned.

Grants and Sub-Funds

When PowerFAIDs performs needs analysis for a student, it may award the student a certain amount of grant funding, initially identified as Institute funds. Once that information is fed into MITSIS, the Institute grant is replaced by specific sub-funds which are then disbursed. These sub-funds are donor provided and each fund is tracked separately. MIT is activity engaged in a major donor campaign and anticipates that the number of donor provided funds will grow substantially in the near term.

Currently there are approximately 1,000 sub-funds and approximately 350 of these sub-funds are assigned by hand. Within MITSIS there are about 600 funds that are automatically matched based on a set of rules. There are four types of sub-funds: hand assigned, restricted funds, unrestricted funds and preferential. MITSIS assigns the most restrictive funds first until as many sub-funds that can be assigned are assigned. Some Institute funds are not replaced and continue to be funded by internal sources. Students are not directly involved with seeking sub-fund support and may not be aware of the sources of their financial assistance. One future opportunity is to create greater linkages between donors and the students they support. For

MITLIT-000226363

example, a student's acknowledgement or thank you note to a donor can encourage continuing donations.

Parent Loans

Students can elect to take loans as part of their self-help award, but parent loans (PLUS) are not part of any award made to students; parents have to ask for and apply for the loans. If parents wish to take a Plus loan, they have to apply for it through MIT. Although it is not need based, parent loans are part of the FM process. Parents apply using a form submitted to MIT, but the loan is actually issued and owned by the Department of Education (DOE). Once a parent has submitted a loan application form to MIT, Financial Aid enters the application into ED Express to submit it to DOE. When DOE approves the loan, it comes back through ED Express and is loaded into PowerFAIDs; the feed from ED Express to PowerFAIDs is often missing data (e.g. the field signaling that the promissory note has been signed) requiring follow up by Financial Aid. Additionally, PowerFAIDs has trouble matching the records coming from ED Express to its own records. When these issues arise they must be manually corrected after completing a comparison of the data. PowerFAIDs will track that an award has been made and disbursed, but the actual payments and collections for these loans are handled by DOE.
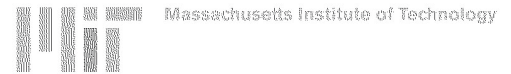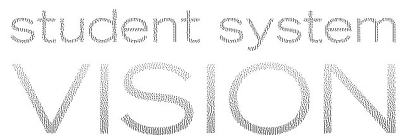
After PowerFAIDs is updated, MITSIS is told an award is ready to be disbursed and MITSIS sends it to SAP. The Treasurer's office does a cash draw and reconciles ED Express and MITSIS (this process assumes that if MTISIS is correct, PowerFAIDs is also).

Student Loans

Perkins Loans
PowerFAIDs stores the amount of loans that students elected to take to fulfill their self-help award. For Perkins loans, this information is sent to Campus Partners (in order to be uploaded to Campus Partners, the data is reformatted through an MIT-developed process). Campus Partners then notifies the student to sign the loan online through a Campus Partners site. A data file is then sent from Campus Partners to Financial Aid that is manually keyed into PowerFAIDs. The student also has the option to sign a paper form at the financial aid office – a paper based option is required by law. If the paper note is signed, it is manually entered into PowerFAIDs, and the document is retained at MIT.

Tech Loans

student system
VISION

Massachusetts Institute of Technology

Unlike Perkin loans, Tech loans are all signed on a paper form and require a co-signer. Co-signers are sent the Tech loan's Master Promissory note to sign and return directly back to Financial Aid. Upon receipt of the executed agreement, the student is required to counter-sign the loan agreement. Then, as with the Perkins loan, data from the form is entered into PowerFAIDs. Once a co-signer has submitted their forms the first year, they do not need to sign the forms again in subsequent years. They must, however, sign an annual disclosure statement.

Before any loans are disbursed, a student must complete an online entrance interview through WEBSIS. Once the loan has been disbursed, MITSIS sends information back to Campus Partners. Campus Partners is responsible for servicing the loans including billing, mailing statements, and processing payments. However, if a student becomes delinquent in their loan repayment, MIT is responsible for the collection of Tech loans while Campus Partners is responsible for the Perkins loans.
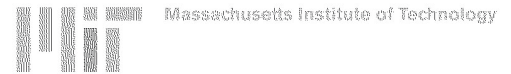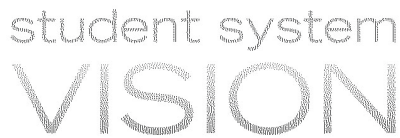
Processing for international students without SSNs is problematic when interfacing with Campus Partners. For international students without SSNs, MIT ID numbers are passed to Campus Partners. By the second semester these students have received their SSNs and this information is passed to Campus Partners. However, Campus Partners cannot match the records because of the difference in key fields, resulting in the creation of duplicate records. Financial Aid staff have to go to the Campus Partners site to correct this manually. Furthermore, international addresses are not always imported into Campus Partners correctly because of formatting and editing differences.

Student loan payments can be sent either to Campus Partners or to MIT. When the payments come into MIT, they are entered into Campus Partners systems, and then posted to MITSIS and finally interfaced to SAP, where a cash reconciliation occurs. There is a reconciliation process between Campus Partners and SAP that works reasonably well.

A feed between MITSIS and Campus Partners tracks a student's registration status and separation date. If a student's status falls below half time, they are required to begin repayment of their loans. However, this information must be manually entered into Campus Partners.

Outside Funding

There are a myriad of sources for outside funding: alternative loans, external scholarships, MIT benefits, sponsored billing, among others. These types of funds present some challenges because, while they are not awarded based on need, they do affect MIT's need analysis for the student. Instead of considering these as normal

MITLIT-000226365

funds and bringing them into the financial aid process, as a policy MIT chose to consider this type of funding as student contribution.

There are two ways in which Financial Aid is notified of an outside funding source: either the student notifies them or a check arrives. When a check comes in, it is tracked in an Excel spreadsheet but not deposited until the student actually registers. The accuracy of the posting depends on the quality of the information provided by the donor and sometimes it is not clear for whom a payment is being made or if it is for the semester or the school year.

When Financial Aid is aware that an outside fund will be coming in, it is represented in PowerFAIDs as an anticipated award, and it influences packaging amounts. Once the actual money comes in, it is applied to the student's account. Because PowerFAIDs is not updated for the disbursement of the external aid to the student account, the anticipated fund remains on the student account until it expires. In most cases, the anticipated fund expires before the student's next statement is produced so that the student is not aware of the issue.

If after packaging, a new outside fund comes in for a student, the student must be repackaged. The fund is first applied to the student's self help, then against the student's contribution.

Veteran Benefits

This is a government program for any veteran who has paid into the Educational Savings Program. These veterans receive a 300+% return on the money they have paid into this program. MIT will certify the student's eligibility to receive this benefit, but it is the student's responsibility to notify the Institute and file the application.

Once certified, a monthly stipend is sent directly to the student. This benefit does have direct effect on the need analysis of the student. For reporting purposes, it is treated like an outside scholarship.

student system
VISION

Massachusetts Institute of Technology

High Level Financial Aid Process for Incoming Undergraduates
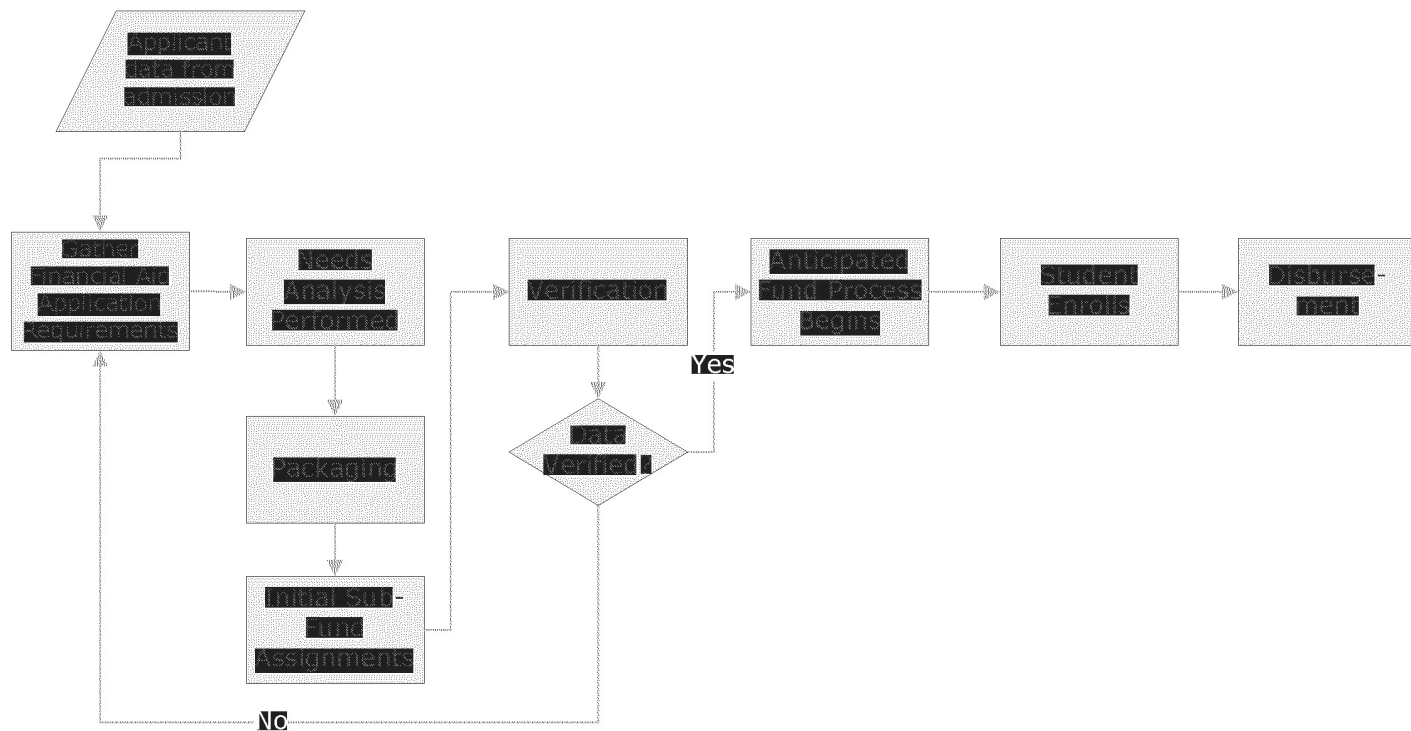
Note: If an outside scholarship is received after packaging has already occurred, the process recycles back to needs analysis. The student will be re-packaged and any disbursement of funds must be reversed.

MITLIT-000226367

student system
VISION

Massachusetts Institute of Technology

High Level Financial Aid Process for Continuing Undergraduates
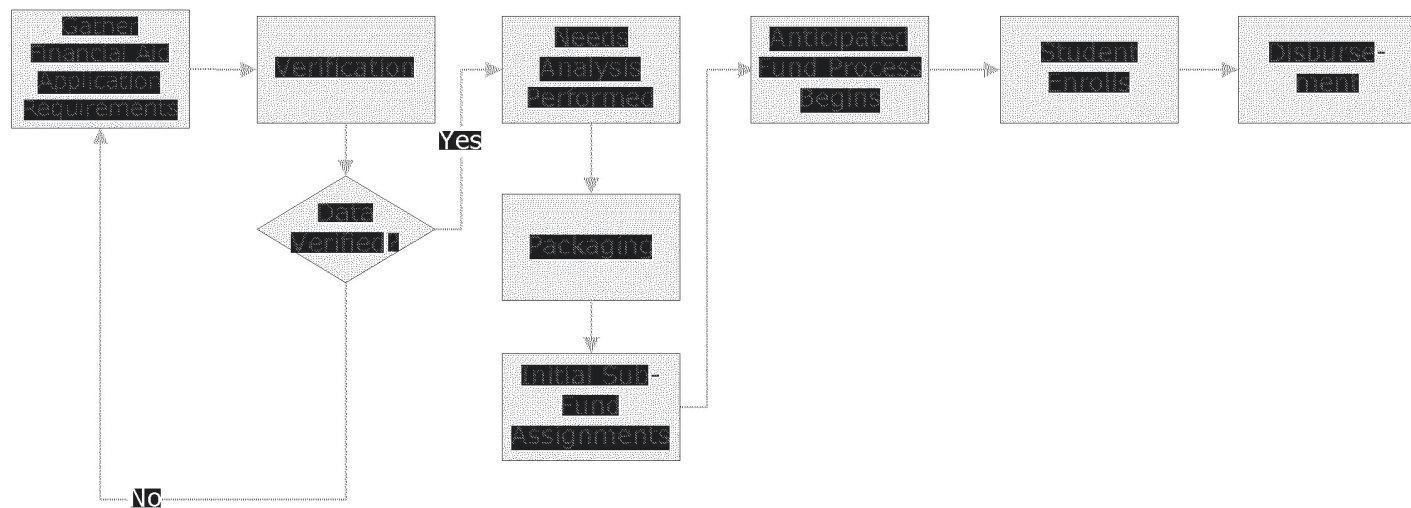
Note: If an outside scholarship is received after packaging has already occurred, the process recycles back to needs analysis. The student will be re-packaged and any disbursement of funds must be reversed.

MITLIT-000226368

Future State – High Level Descriptions

Overview

This future state description focuses on the Financial Aid process and services that might exist in the future. It is based on both the current needs and desired functionality expressed by workshop participants and students. This description represents a possible future state; the future processes and technologies will vary based on the direction the Institute chooses at the completion of the Student System Vision. The following future state high level descriptions are written in the present tense.

The Student Perspective

MyMIT – The Student Portal

Prospective students register for a MyMIT account that remains active for the rest of their lives. The MyMIT student portal provides students a consistent experience throughout their lifecycle of interacting with student administration processes at MIT. From the student service perspective, the transition from prospect to applicant to student to alumni is seamless, and the way information is entered and accessed remains consistent throughout. A student no longer has a different user experience when switching between admissions, enrollment and alumni systems because the systems supporting all of the administrative student functions are accessed through the one student portal. The information a student sees on the portal is personalized to support their changing status at the Institute. In addition to a consistent look and feel, the student portal provides a place for "one stop shopping" by delivering information, notifications, and self-service transaction access. The portal serves as the point at which the student conducts all web transactions and receives official Institute communications and reminders.

Early Application Kit

For most students, their interaction with financial aid begins when they register as a prospective student for their MyMIT account. Prospects gain access to the early application kit through the portal and are provided with an estimated financial aid package based on basic information they enter into the kit. Data provided at this point is captured and reduces the amount of entry that needs to be done later. Because students have an understanding of the aid they may receive, they are able to make more informed decisions about pursuing admission to MIT and have a better understanding of whether they can afford to attend MIT. Since MIT is need blind and

committed to meeting a student's full need for eight semesters, prospects are comforted by the results of the estimator and encouraged to complete their admissions application.

Enhanced Web Services

Not only can a portal provide students with one-stop shopping, it can help deliver services that previously had to be done via paper or in person. For example, whereas students were previously required to fill out a paper form to request a refund check and then go to SFS in person to pick up the check, the entire process can now be accomplished online. Students complete a short form to request the refund. Financial Aid can review the request online and approve it, and the refund is electronically deposited into the student's account or applied as TechCash based on student preference. A full range of self-service transactions is available to students so that Financial Aid counselors can focus their attention on the students that need assistance with non-routine issues.
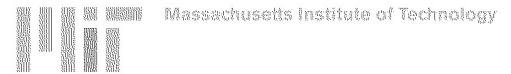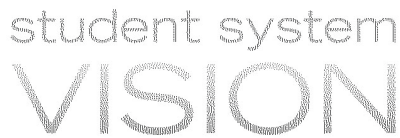
Additionally, students can receive their award via the portal, complete any required forms and be prompted to make their self help selections. If a student cannot complete a process themselves by completing an online form, they can advance the process by completing all of their necessary items and push it to a Financial Aid counselor. When the counselor logs in, they will be alerted in their personalized portal "to do" list to the student matter requiring attention. Although 24/7 in-person support is not available, being able to move the process forward in this manner ensures that everything is addressed and completed in a timely manner.

Student and Donor Profiles

Once specific sub-funds have been assigned to a student, that student can go to their MyMIT account and view profiles of the donors whose generosity and commitment has helped fund their education. Likewise, donors are interested in knowing the story of the student whom they are funding. Students are encouraged to share their online portfolio with donors. A student can also share their portfolio with potential employers, mentors, friends, family, and others, but the student controls which components of their portfolio are available to each user granted access. The portfolio can contain a wide range of information: basic profiles, examples of work, research activity summaries, and resumes.

Communication

Because important communications from Financial Aid are pushed to the student's portal, students have one place to go to access official communications. In addition to official MIT communications, students can subscribe to notifications of interest to

MITLIT-000226370

them. These communications could include information about sporting events, Institute activities or dining menus.

Greater Satisfaction

By providing students with an environment that gives them current, accurate information on a timely basis, and providing tools and forms to facilitate the financial aid process, students are better served. Students and Financial Aid staff spend their time on issues and exceptions rather than on routine data capture and reconciliation. As a result, problems are resolved earlier in the process.

The Administrative Perspective

The Big Picture

The new Financial Aid System is highly robust, accurate, and flexible. Data seamlessly and accurately integrates between all the systems and interfaces in use without the need for manual corrections, while allowing for efficient exception handling. The system has been constructed in a flexible manner to allow timely customizations and configurations capable of supporting both the unique needs of MIT as well as changes in the regulatory environment which are provided through vendor updates.

Rather than moving mass amounts of data from one application to another, data is stored and shared across the application processes. Information is presented at a uniform access point, providing fast, one-stop look up that can be secured at a granular level, providing appropriate control over access to information.

Data definitions have been standardized across the student administration applications so that the need to "transform" data through manual processes is virtually eliminated. As a result, reporting accuracy and completeness are greatly improved.

Ad hoc reporting tools and standard on-demand reports are available for users. The tools can be used to respond to non-routine inquiries and provide the ability to select and extract data to office tools.

Prospect-Applicant Tracking

Instead of waiting for students to submit their admissions application, Financial Aid can track them as soon as they become prospects. As prospective students call Financial Aid with questions about their particular circumstance, SFS can track the contacts and conversations through a Customer Relationship Management (CRM) or contact management system integrated with the admissions system. On a single

MITLIT-000226371

screen, a Financial Aid counselor can inquire or update all relevant information submitted by the prospect as well as records of any previous interactions with Financial Aid. FAFSA forms coming into SFS are immediately matched to the existing prospect profiles, allowing Financial Aid to quickly inform students that their required forms have been received.

For purposes of advising students on missing information, Admissions officers can view an applicants' financial aid status, and likewise, Financial Aid counselors can see an applicant's admissions status, enabling both to provide much better service for the students.

A Single View

Although Financial Aid continues to use third party tools and partners such as Campus Partners and College Board, they no long have to log into multiple systems to gain a complete picture of a student's status. A robust set of authentication services allows the Financial Aid staff to log in once, and authenticate through to MIT's partner systems. Additionally, an interface/service has been built to extract data from multiple sources and present Financial Aid counselors with a single page displaying comprehensive information about a student, including information sourced from third party partners and the registration system. The page also tracks communications sent to and received from the student so that a counselor can be informed about unique issues or circumstances for that student.
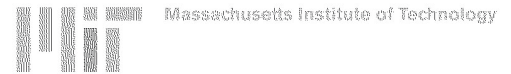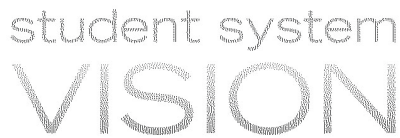
Simulations

Financial Aid processes can be run in simulation mode so that, for example, the assignment of sub-funds can be adjusted and reports produced to summarize preliminary results of the packaging process. It allows staff to ensure that the results of a process will match what has been anticipated.

Simulation processes could then be fully committed or completely reversed once the results are reviewed.

Communication

Timely communication with students remains a priority. In addition to the traditional methods of paper mailings which would continue as a means of potentially reaching parents, Financial Aid staff can push important messages to MyMIT, a portal that a student starts using when they are a prospect and continues to use during their time as a student at MIT and as they become alums.

Financial Aid can push a range of message types out to students in this manner from general deadline reminders sent to the entire student body to student specific messages. Missing information letters no longer need to be sent as that information is

automatically pushed to students' MyMIT accounts to view immediately when they log in.

Some forms and communications will still need to be printed, and to facilitate that, the system contains tools to automate the production of paper communications. Templates are easily created and updated. It is simple to edit both the static text and the information being merged. Items such as promissory notes are printed directly from the system.

Online Forms

To expedite the financial aid process, paper forms not mandated to be paper are now available as online forms. Forms are presented on the MyMIT portal and students are prompted to complete those relevant to their situation. Prompting students in this manner enables the reporting of information such as outside scholarship data in an expedient manner. This saves Financial Aid time by avoiding the re-packaging that occurs when outside scholarships are discovered later in the process. Additionally, students go online to allocate the type of self help they are accepting, reducing the time spent by Financial Aid to enter student elections.

Online forms assist students with the entry of timely accurate data which improves the services and quality of the Financial Aid process.

Calendar

The system provides calendaring flexibility that allows SFS to be more accommodating to the timing of various academic, governmental, and business processes. Disbursements are run by semester and are no longer dependent solely on effective dates. Graduate programs that begin in January are no longer problematic. Perhaps the greatest advantage of not being tied to a specific calendar is the ability to award early admits their package, enabling them to accept their offers of admission much earlier than was possible before.

Imaging

Due to certain regulations and student preferences, Financial Aid has continued to receive some paper forms. Upon receipt of paper forms, staff immediately scan the documents which are then stored as images attached to the appropriate student's financial aid record. These documents can be easily viewed by any staff member with the correct permissions and the need to pass paper is eliminated.

Timeline Implications

The systems supporting financial aid processes include PowerFAIDs and MITSIS, along with a number of third party provided tools and interfaces.

PowerFAIDs is a vendor provided package under license that is routinely maintained through quarterly updates. It is one of the industry leading products and represents a top tier financial aid point solution. While a number of gaps in functionality were identified, some can be corrected by revisiting decisions made about configuration or possibly work-around processes. PowerFAIDs cannot be modified by the Institute because of source code ownership restrictions. The technology is current and the application could continue to support financial aid operations into the future. Replacement of PowerFAIDs can be held well into the future, assuming that integration issues with other systems can be corrected.

As previously discussed, MITSIS is used to disburse financial aid to a student's account among other primary financial aid functions. MITSIS is a series of applications purchased years ago and subsequently modified and rewritten by MIT. The major timeline implication for MITSIS is the loss of vendor support for the primary development tool Oracle Forms, expected in 2013. A technology resolution for the obsolescence of Oracle Forms should be in place by that time.

MITLIT-000226374

student system
VISION

Massachusetts Institute of Technology

Appendix

Issues and Opportunities

1. Social Security Number (SSN) is used as a unique identifier (Key Value) but is not always available

a. Issue

   i. SSN is used as a unique identifier used by both PowerFAIDs and Campus Partners, unlike MITSIS that uses MIT ID. This creates an issue because SSN is not always available to Financial Aid at the point when data is loaded to these systems. SSN is not a required data field for admission processing and therefore some U.S. citizens do not include it, while most international students do not have a SSN at the time they apply for admission. When SSN is missing, MIT ID is substituted for it within any interfaces to PowerFAIDs.

   ii. SSN is required by Financial Aid, and at some point all students who receive financial aid must provide a SSN. When SSN is submitted later in the process cycle, matching and duplication issues arise in both PowerFAIDs and Campus Partners. Because only SSN is used to match records, when an update feed is extracted and loaded to either third party system, a match is not found because in the original data load, MIT ID was used in place of SSN. Therefore a duplicate record often gets created, one with the MIT ID as the unique identifier and another with SSN as the unique identifier. These mistakes must be identified and corrected through a manual process.

2. The integration and interfaces between all systems used by Financial Aid are unreliable.

a. Issue

   i. Many of the interfaces between systems used by Financial Aid are not reliable and considerable effort is expended performing manual reconciliations of data as it moves across systems. Below is a list of some of the known integration and interface issues:

- *Registration file load:* The feed from MITSIS to PowerFAIDs fails to upload the registration update file because the file size is too large. This happens at least twice a semester (registration day and add date) when transaction volumes are especially high. A temporary resolution has been to split the file on these days to load it in batches. In those circumstances the run times are still excessively long.

Page 28

- *PowerFAIDs and MITSIS interfaces are unstable:* There are several issues with the PowerFAIDs to MITSIS interface including integrity of the data transfer, difficulty with correcting the process when it fails, inability to automate error correction and the need for extensive manual reconciliation as a result of unintended changes to data and information as they are processed through the interface.
- *PowerFAIDs to ED Express:* A flat file must be exported from PowerFAIDs. It is then imported into Access where a macro is run to reformat the data for ED Express. This process requires manual intervention and is cumbersome.
- *Entrance Interview feed from MITSIS to PowerFAIDs:* This data feed is not always successful, creating errors and reconciliation issues that must be handled manually
- *Tech Loan co-signer information does not load to Campus Partners*: an Financial Aid staff member must manually enter the co-signer information into Campus Partners.
- *PowerFAIDs missing outside funding data:* Outside funds are applied to student account but PowerFAIDs is not notified

ii. As a result of these integration issues, data is not always accurate across the various systems with which Financial Aid must work. That requires many manual reconciliation processes to ensure that data is accurate, relying heavily of the Financial Aid and other SFS staff to catch and correct these errors. As a result, financial aid staff have less time to focus on individual student problems.

3. **Student displays in WEBSIS are confusing and incomplete**
   a. **Issue**
      i. WEBSIS does not display financial aid information for multiple academic years even though students have a need for both current year aid information and the upcoming year application status. Additionally, WEBSIS displays both the anticipated funds and actual funds to the student even though students do not have any knowledge of the difference.
      ii. These display issues cause problems for students. Information presented to students is both incomplete and inaccurate. As a result, students must contact Financial Aid in order to understand their current status.

4. **Reporting needs are not being met**
   a. **Issue**
      i. Reports do not currently exist to effectively complete the reconciliations across SAP, MITSIS, and PowerFAIDs. As referenced above, manual

reconciliations are performed daily on all data moved across the systems because the interfaces are error prone.

    ii. Not all financial aid information is currently being stored in the warehouse. As a result new reports may need to extract data from both the transaction system and the warehouse, resulting in the need to merge the data and reconcile it.

5. **Data definitions are not consistent**
   a. **Issue**
      i. Data definitions across all the Student Information Systems are not consistent, causing confusion and inaccuracy. For example, the separation date for students who have withdrawn is different in Financial Aid than the Registrar's Office, which has the potential to raise audit issues since the systems of record are not consistent.

6. **Data Access**
   a. **Issue**
      i. Staff members do not have access to all of the information needed to effectively do their work; this situation occurs most often for data owned by other offices. When an admissions officer or financial aid counselor is speaking with a student she/he cannot answer questions about what is missing from the student's applications for both admission and financial aid
     ii. By not providing access to all needed information, inefficiencies are created and students do not receive the prompt accurate help that they need.
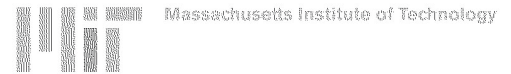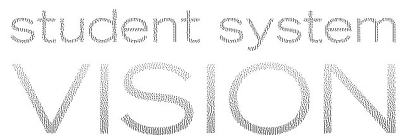
7. **When the PowerFAIDs award is replicated to MITSIS, MITSIS defaults to splitting the award evenly across semesters.**
   a. **Issue**
      i. Even though the award may be split unevenly across semesters in PowerFAIDs, it is always split evenly when it is replicated in MITSIS. This requires a Financial Aid staff member to go to the MITSIS award screen and manually correct the semester split.
     ii. When the award for fall semester is disbursed to a student account, if the amount on the MITSIS Student Account for fall does not match what is on MITSIS Award, the award is not applied until the amounts match.
    iii. Any change to a student's award in PowerFAIDs that is replicated to MITSIS after the manual adjustment has been made will overwrite the manual adjustment requiring multiple corrections.

8. **PowerFAIDs handles re-packaging by deleting the prior package**
   a. **Issue**

i. Once any portion of an award is disbursed, PowerFAIDs is not able to support re-packaging. The limitation is that disbursed funds cannot be deleted. There is currently a manual work around for this but it is time-consuming and error prone, and is complicated by the issues associated with interfaces between PowerFAIDs and MITSIS.

9. **Funds are disbursed based on effective date, not by semester**
   a. **Issue**
      i. Effective dating rules currently may cause problems by accidentally disbursing the fall amount with spring credit or applying the same credit multiple times.
      ii. There are federal penalties for disbursing early that may be impacted by the disbursement errors

10. **Outside funds cannot be split across multiple semesters**
    a. **Issue**
       i. All outside funds are applied to the student account as payment for the semester in which they are received; this arises in part because the sponsor may not provide the information, but also because a deferred credit cannot be applied. When sponsors do not provide the information, the Institute assumes that application to the current semester is appropriate.

11. **Departments have graduate programs that begin at various points.**
    a. **Issue**
       i. Graduate programs do not align with the registrar's standard calendar. They can begin in July, September or January.
       ii. For programs starting in January, Financial Aid can only give the students their financial aid statement for the spring, but students need it for the entire year.

12. **Admissions and Financial Aid have inconsistent timing of communications**
    a. **Issue**
       i. Financial Aid needs to contact students who have been admitted about missing financial aid documents before the student has been notified that they have been admitted. This must happen in a way to ensure that the student is not prematurely notified of the admittance

Current interfaces

System	Information sent to	Information Received From
Admissions - Stargate	Update file containing Fin. Aid. Requirement status	• Freshman Load (applicants) to MITSIS • Transfer Load (applicants) to MITSIS • New Student Load (when students accept offer of admissions) to MITSIS • SSN Updates
Department of Education – ED Express	• FAFSA verification corrections • Direct Loan Info • Pell grants, ACG, Smart, Loans, FISAP, SSCR (Student Status Confirmation Roster), • COD, Perkins, Tech – origination and disbursements for all	• FAFSA info loaded to PowerFAIDs • Stafford Loan info loaded to PowerFAIDs
College Board		• Profile • iDoc(scanned images) • Data file (keyed in tax data)
Campus Partners	• Perkins loan and disbursement info • Tech loan, disbursement and co-signer info • MIT Tech loan payment receipts • Registration status and separation dates	• Perkins signature info • Loan repayment information

student system
VISION

Massachusetts Institute of Technology

SAP	• Cash Draw, Disbursement information • Monthly Sub-Fund Assignments from MITSIS	Sub-Fund load to MITSIS
ELM		
Data Warehouse		
NCAA	Annual data dump of athletic recruits	
COFHE		
Petersons		
Treasurer's Office	FS 272 reports Cash Draw	
Mass. State Scholarship Lobby		
U.S. World and News Reports		

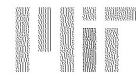| MITSIS/PowerFAIDs Interfaces	Loads
Loads from MITSIS to PowerFAIDs	Registration Confirmation Load
Loads from PowerFAIDs to MISIS	Loads Anticipated Funds to Student Accounts Loads Awards (nightly replication) Loads Package

Current Systems in Use

Internal
MITSIS
PowerFAIDs
Microsoft Access
Excel

External
Campus Partners
College Board
Department of Education – ED Express

MITLIT-000226380

student system
VISION

Massachusetts Institute of Technology

MITLIT-000226381